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COMPARISON OF ALD-52 AND LSD-25

ALD-52 is l-Acetyl lysergic acid diethylamide. Comparison of this drug with LSD was undertaken in order to get some information about structure-activity relationships in this series of psychotomimetics.

METHODS

Subjects were 11 Negro male former morphine addicts, all of whom had been abstinent from opiates for at least six months prior to these experiments. All were in good physical health and none had evidence of any major functional psychoses. All were experienced with LSD.

General Conditions. Subjects were observed in a special experimental ward which they entered on the night before the test. All were familiar with the environment and procedures. Patients were not aware what drugs were being given, although they expected the drugs to have LSD-like effects. Observers, also, were not aware of the identity of the drugs given on any particular day.

Drugs and Doses. Six patients received in randomized order a placebo; LSD, 1 mcgm./kg.; and ALD, 1 mcgm./kg. Four patients received in randomized order a placebo; LSD, 1.5 mcgm./kg.; and ALD, 1.5 mcgm./kg. Drugs were administered orally at 9 a.m. when patients were fasting.

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Observations. Observations consisted of threshold for kneejerk, size of pupils, systolic blood pressure, response to modification of Abramson-Jarvik questionnaire, and assessment of clinical grade. These measurements were made at hourly intervals, two hours before, and eight hours after ingestion of the drugs. Data on kneejerk, pupillary size, and blood pressure were plotted on graph paper against time. Average of the two pre-drug determinations was used as a baseline and the area was measured with a planimeter, converting all data to a single figure. The response to questionnaire was evaluated by counting all questions scored positively after administration of the drug, eliminating any that were also scored positively before drug. Clinical grades were assessed according to system previously described.

Results are shown in the table. It is apparent that ALD is an active drug which induces changes similar to those induced by LSD. Figures also show it to be at least as potent as LSD. The fact that the grades were higher for ALD at the 1-mcgm. level and much higher in the 1.5-mcgm. level suggest that ALD may be somewhat more potent than LSD. In order to establish this point definitively, dose-effect curves would have to be run, which hardly seems worthwhile at this time.

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Mental phenomena observed after ALD were identical with those seen after LSD and consisted of anxiety, hostile sensations, confusion, clear sensorium, depersonalization, derealization, hallucinations chiefly visual in character, etc., etc.

Conclusion. ALD-52 is an active psychotomimetic drug which is at least as potent as LSD-25.

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SURE	DRUG AND DOSE					
	Placebo (6)	LSD 1.0 mcgm./kg. (6)	ALD 1.0 mcgm./kg. (6)	Placebo (4)	LSD 1.5 mcgm./kg. (4)	ALD 1.5 mcgm./kg. (4)
[illegible]	0.75 ± 0.34	2.30 ± 0.5	2.68 ± 0.46	0.20 ± 0.5	2.44 ± 0.7	3.25 ± 0.6
illary meter	3.83 ± 0.3	4.35 ± 0.47	4.30 ± 0.55	9.95 ± 0.5	4.10 ± 0.4	4.26 ± 0.8
od ssure	0.94 ± 0.35	2.32 ± 0.36	2.89 ± 0.28	1.03 ± 0.57	3.17 ± 0.97	3.43 ± 0.62
ations	5 ± 5	50 ± 17	54 ± 11	0 ± 0	21 ± 9	53 ± 18
inical	0 ± 0	1.5 ± 0.4	2.0 ± 0.4	0 ± 0	1.0 ± 0.7	2.5 ± 0.7

Numbers in parentheses indicate number of subjects.

Figures are means ± standard errors.